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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,836	02/25/2005	Steffen Scholze	DE02 0196 US	9613

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NXP, B.V.
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EXAMINER

PERUNGA VOOR, SATHYANARAYA V

ART UNIT	PAPER NUMBER
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2624

NOTIFICATION DATE	DELIVERY MODE
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04/28/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary	Application No. 10/525,836	Applicant(s) SCHOLZE ET AL.	
	Examiner SATH V. PERUNGA VOOR	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant(s) Response to Official Action

[1] The response filed on January 8, 2008 has been entered and made of record.

Response to Arguments/Amendments

[2] Presented arguments have been fully considered, but are rendered moot in view of the new ground(s) of rejection necessitated by amendment(s) initiated by the applicant(s).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

[3] Claims 1, 4, 5 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Jain et al. (“Jain”) [US 6,263,091 B1].

Regarding claim 1, Jain meets the claim limitations, as follows:

A method of assessing the quality of skin print images, and particularly fingerprint images, characterized in that gradients are calculated for the pixels of a skin print image such that a gradient is calculated for each pixel of the skin print image [col. 9, ll. 7-15], in that a mean value is derived from the gradients of the pixels in each region of the skin print image [col. 10, ll. 53-67] and in that similarities (*i.e. consistency*) in the mean values from region to region form a measure of quality [col. 11, ll. 15-30 and 40-50].

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Regarding claim 4, Jain meets the claim limitations, as follows:

A method as claimed in claim 1, characterized in that the lengths of the average gradients (*i.e. gradient magnitude*) are used to determine a region of interest (*i.e. foreground*) of the skin print that has been scanned [col. 12, ll. 55-67].

Regarding claims 5 and 8, all claimed limitations are set forth and rejected as per discussion for claims 1 and 4.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[4] Claims 2, 3, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jain in view of Bazen et al. ("Bazen") [NPL document titled, "Directional Field Computation for Fingerprints Based on the Principal Component Analysis of Local Gradients"].

Regarding claims 2 and 3, Jain meets the claim limitations as set forth in claim 1.

Jain does not explicitly disclose the following claim limitations:

2. A method as claimed in claim 1, characterized in that the gradients calculated initially, which have the components $g_{x(alt)}$ and $g_{y(alt)}$, are squared after the fashion of a complex number by the formulas $g_x = g_{x(alt)}^2 - g_{y(alt)}^2$ and $g_y = 2 g_{x(alt)} * g_{y(alt)}$.
3. A method as claimed in claim 1, characterized in that the mean values are

entered in two directional matrices for x and y, in that scalar products are formed of the directional matrices together with the matrices that are displaced horizontally, vertically and in the directions of both diagonals by one region, in that each of the products that were obtained in that way by multiplying the matrices are summed over all the regions of the skin print image, and in that the sums are added together and are divided by the sum of the scalar products of the directional matrices with themselves in order to calculate the quality measure, said sum of the scalar products of the directional matrices with themselves being summed up over all the regions.

However, in the same field of endeavor Bazen discloses the deficient claim limitations, as follows:

2. A method as claimed in claim 1, characterized in that the gradients calculated initially, which have the components $g_{x(alt)}$ and $g_{y(alt)}$, are squared after the fashion of a complex number by the formulas $g_x = g_{x(alt)}^2 - g_{y(alt)}^2$ and $g_y = 2 g_{x(alt)} * g_{y(alt)}$ [page 2, equation 4].

3. A method as claimed in claim 1, characterized in that the mean values are entered in two directional matrices for x and y [page 2, col. 2, para. 4], in that scalar products (i.e. $2G_x G_y$) are formed of the directional matrices together with the matrices that are displaced horizontally, vertically and in the directions of both diagonals by one region [page 3, col. 1, para. 2; page 5, equation 46], in that each of the products that were obtained in that way by multiplying the matrices (i.e. $2G_x G_y$) are summed over all the regions of the skin print image [page 5, equation 46], and in that the sums are added together and are divided by the sum of the scalar products of the directional matrices with themselves in order to calculate the quality measure (i.e.

Cob), said sum of the scalar products of the directional matrices with themselves being summed up over all the regions [page 5, equation 45].

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Jain with Bazen and include a coherence metric, the motivation being to establish trends in the directional field [page 3, para. 2].

Regarding claims 6 and 7, all claimed limitations are set forth and rejected as per discussion for claims 2 and 3.

Conclusion

[5] Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

[6] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Sath V. Perungavoor whose telephone number is (571) 272-7455. The examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Matthew C. Bella whose telephone number is (571) 272-7778, can be reached on Monday to Friday from 9:00am to 5:00pm. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dated: April 24, 2008

/Matthew C Bella/
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